

Water Security Agency



Annual Report for 2016-17

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Letters of Transmittal



*The Honourable Scott Moe
Minister Responsible for the
Saskatchewan Water Security
Agency*

Her Honour, the Honourable Vaughn Solomon Schofield,
Lieutenant Governor of Saskatchewan

May it Please Your Honour:

The Government of Saskatchewan is committed to continuing the steady growth of the Province of Saskatchewan, while observing the principles of accountability, transparency and responsible spending. The 2016-17 Annual Report shows Water Security Agency's progress on its initiatives, strategies and other commitments as of March 31, 2017.

Each year, the Water Security Agency makes significant investments in rehabilitation of the province's water management infrastructure. In 2016-17, that investment was \$17.7M. That number includes a \$12.5M investment in a ten year project to rehabilitate the M1 Canal. This 22.5 km canal supplies water from Lake Diefenbaker to Broderick Reservoir and supports 55,000 acres of irrigation, six reservoirs, towns and villages, three potash mines, 13 wetland projects and Blackstrap Provincial Park. To date 64% of the canal has been rehabilitated. When the entire rehabilitation is complete in 2021 the canal's capacity will increase by 52%.

The Water Security Agency also invested \$900K to maintain capacity of the channel that carries water from Lake Diefenbaker south to Buffalo Pound Lake, supplying water to Regina, Moose Jaw, a number of smaller communities, two potash mines, a fertilizer producer and an ethanol plant. This water also stabilizes the levels of eight lakes within the Qu'Appelle System enhancing recreation and property values.

This year, the Water Security Agency successfully completed negotiations to accept transfer of 20 dams from the federal government. Owning and operating these dams fits well with the Agency's mandate, operations and responsibility for managing our water resources and related infrastructure.

The Agency's Emergency Flood Damage Reduction Program served 69 clients this year, bringing total clients served to 3300 since the program launched in 2011. This year's grants totaled \$3M.

Since 2015, Saskatchewan has seen the first major changes to how the government handles drainage in 35 years. The Water Security Agency has led the consultation, design and implementation of the new Agricultural Water Management Strategy. Pilot projects have tested the new approach and resulted in a history-making drainage approval. In February, 73 landowners received a single approval for more than 18,000 acres of an organized, responsibly-managed drainage network, the Dry Lake Project in southeastern Saskatchewan. In this, as in so many areas, farmers are leading the changes and proving that by working together, practical solutions can be brought to long-standing drainage issues.

The report also documents progress by the Water Security Agency and partner ministries and agencies on implementing the 25 Year Saskatchewan Water Security Plan.

I respectfully submit the Annual Report of the Water Security Agency for the fiscal year ending March 31, 2017.

Sincerely,

*Scott Moe
Minister Responsible for the Water Security Agency*



The Honourable Scott Moe,
Minister Responsible for the Water Security Agency

Dear Minister:

I have the honour of submitting the Annual Report for the Water Security Agency for the fiscal year ending March 31, 2017.

Management is responsible for the financial and administrative management of the Water Security Agency and for preparing this report in accordance with the Government's systems of planning, measuring and reporting. All key actions and associated economic or fiscal implications in this report are, to the best of my knowledge, accurate and reliable.

Respectfully submitted,

A handwritten signature in black ink. The signature is stylized, starting with a large 'S' and 'R' that are connected. Below the 'S' is a small 'u'. To the right of the 'R' is the word 'ross' in a cursive script.

Susan Ross
President, Water Security Agency

Introduction

This annual report for the Water Security Agency presents the Agency's results for the fiscal year ending March 31, 2017. It provides results of publicly committed strategies, key actions and performance measures identified in the *Water Security Agency's Plan for 2016-17*. It also reflects progress toward commitments from the Government Direction for 2016-17, the *Saskatchewan Plan for Growth – Vision 2020* and Beyond, throne speeches and the Agency.

The annual report demonstrates the Agency's commitment to effective public performance reporting, transparency and accountability to the public.

In October 2012, Government introduced the *25 Year Saskatchewan Water Security Plan*, which established the Water Security Agency. The Water Security Agency leads the implementation of the *25 Year Saskatchewan Water Security Plan*, providing a sustainable approach to water use that will protect the quality and quantity of water now and for the future. See Appendix A for a more detailed progress report on the 89 actions of the *25 Year Saskatchewan Water Security Plan*.

Alignment with Government's Direction

The Agency's activities in 2017-18 align with Saskatchewan's vision and four goals:

Saskatchewan's Vision

"... to be the best place in Canada – to live, to work, to start a business, to get an education, to raise a family and to build a life."

Sustaining growth
and opportunities for
Saskatchewan people

Meeting the challenges
of growth

Securing a better quality
of life for all
Saskatchewan people

Delivering responsive
and responsible
government

Together, all ministries and agencies support the achievement of Saskatchewan's four goals and work towards a secure and prosperous Saskatchewan.

Agency Overview

The Water Security Agency (WSA) is a unique organization in Canada - bringing together all of government's core water management responsibilities in one place. WSA manages the province's water supply, protects water quality, ensures safe drinking water and treatment of wastewater, owns and operates 69 dams and related water supply channels, helps to reduce flood and drought damage, protects aquatic habitat, and provides information about water. The Water Security Agency also represents Saskatchewan on transboundary water issues.

The Saskatchewan 25 Year Water Security Plan guides the actions of the Water Security Agency (WSA), ensuring a sustainable approach to water use that will protect the quality and quantity of water now and for the future. The Water Security Agency reports to the Minister Responsible for Saskatchewan Water Security Agency, who also serves as a one person Board of Directors.

The Water Security Agency budgeted 221.6 full time equivalents (FTEs) to deliver its programs and services in 2016-17. On March 31, 2017, actual FTEs were 197. In the last quarter of 2016-17, WSA began to fill many vacant positions.

Water Quality and Safe Drinking Water

The Water Security Agency (WSA) leads the ongoing planning, implementation and reporting associated with drinking water governance and management in the province. WSA inspects and regulates compliance for all of the:

- ⇒ 810 regulated water works and
- ⇒ 588 regulated wastewater facilities in Saskatchewan.

WSA monitors water quality at 24 primary surface water quality stations in Saskatchewan and manages the provincial drinking water information database (Environmental Management System – EMS) that stores all the water quality and inspection data for all regulated works, as well as the collected surface water quality data. WSA also manages the SaskH2O.ca website, which presents drinking water-related information gathered from water management authorities within the province.

Maintaining and Investing in Water Infrastructure

In 2016-17, the Water Security Agency maintained and operated 49 dams and 130 kilometres of conveyance channels, plus ancillary works. Each year WSA makes significant investments in the rehabilitation and upgrading of this infrastructure. For 2016-17 that investment was \$17.7M. (At midnight on March 31, 2017 WSA accepted ownership and operation of 20 dams previously owned and operated by the Federal government. Those dams will be included in the 2017-18 report.)

Water Supply

The Water Security Agency provides hydrology services including flood forecasting, operation planning, sustainable water allocation, and low risk building development. WSA operates a hydrometric network of 283 stations in association with the Government of Canada to collect data on stream flows and lake levels. In addition to surface water monitoring WSA operates the provincial ground water monitoring network and conducts regional ground water mapping and resource assessment. This data helps us to provide information to citizens and industry to help locate water supplies. In certain areas of the province WSA represents Saskatchewan on transboundary water issues through membership in organizations like the Prairie Provinces Water Board, the International Joint Commission and others.

Sustainable Water Allocation

All major surface and ground water allocations require approval by the Water Security Agency to ensure sustainable water use. Water is not owned privately in Saskatchewan. It is allocated for use and ownership is retained by the Crown. The Water Security Agency acts in the public interest to ensure public and industry security of access. This includes municipal, industrial, irrigation and intensive livestock use.

Reducing Flood Damage

The Water Security Agency determines the flood susceptibility of proposed new subdivisions considering the 1 in 500 design standard. The Emergency Flood Damage Reduction Program helps clients prevent and mitigate imminent flood damage.

Public Partnerships

Effective water management and source water protection depends on public understanding, support and participation. The Water Security Agency works with community representatives to develop watershed protection plans. Plans include initiatives to help landowners improve watershed health through restoration of riparian areas, protection of grasslands and wetlands and encouragement of management practices that benefit fish and wildlife. Watershed stewardship groups lead implementation of watershed protection plans with financial and technical support from the Water Security Agency.

Enforcement

Fair and effective water management may occasionally require enforcement. Ministry of Environment Conservation Officers provide support to the Water Security Agency for enforcement work through a contractual agreement.

Progress in 2016-17

Government Goals

Sustaining growth
and opportunities for
Saskatchewan people

Meeting the challenges
of growth

Securing a better quality
of life for all
Saskatchewan people

Delivering responsive
and responsible
government

Strategic priorities relate to the Saskatchewan Plan for Growth vision of "Building the Infrastructure for Growth" and "Advancing Saskatchewan's Natural Resource and Agricultural Advantage" and The 25 Year Saskatchewan Water Security Plan goal of "Sustainable Supplies."

Agency Goal – Sustainable surface and groundwater supplies

Strategy – Ensure appropriate allocation, provision of critical supplies and efficient use of water

Key Actions and Results

Centralize water rights files and ensure the information on each file is up to date and reflects actual water use

- ⇒ Since initiation of the project in September of 2015, a total of 516 water rights licences have been cancelled as obsolete. This represents a combined total of 43,624 cubic decametres of water reclaimed from previous allocations.
- ⇒ The majority of the cancelled files had relatively small allocations and were spread across large areas of the province making significant re-allocation of large (combined) volumes of water difficult; however, this has brought existing allocated volumes more in line with actual water use requirements and provides a clearer picture of the status of basins.

Finalize new water allocation policy

- ⇒ This work is ongoing and will continue in 2017-18.

Performance Measures

Cancellation of unused water allocations

- ⇒ A total of 516 water rights licences have been cancelled. This represents a combined total of 43,624 cubic decametres of water reclaimed from previous allocations.
- ⇒ This measure indicates the volume of allocated but unused water that has been removed from a water license, or for which the license has been cancelled in water-short areas of the province, thereby presenting a more accurate picture of allocated and available water and simply a better understanding of the current status of supply.

Saskatchewan Receives "A" for Wastewater Treatment and Water Withdrawals

In April 2016, the Conference Board of Canada gave Saskatchewan an "A" for wastewater treatment and water withdrawals. Saskatchewan was one of only two provinces (along with Prince Edward Island) to get an "A" in this category.

The report suggested that Canada, as a whole, ranked 14th among 16 peer countries when it comes to environmental performance, with only the United States and Australia doing worse. Overall, Canada received a "D" grade based on nine indicators covering climate change, air pollution, and freshwater management.

Wastewater Treatment

Saskatchewan has had requirements for secondary sewage treatment or equivalent capability by means of facultative lagoons for many years. Since the 1970s the various agencies charged with regulating the municipal sector have taken a proactive and preventative approach in the area of wastewater management.

In many situations in Saskatchewan "dilution isn't the solution to pollution." With limited flows and small streams, Saskatchewan has little surface water to rely on to dilute waste when discharged, as is the practice in some other areas. Rather, Saskatchewan must rely on better treatment from the start.

More recently in June 2015, Saskatchewan enacted revised requirements for wastewater management, consistent with the Canadian Council of Ministers of the Environment Canada-Wide Strategy for Municipal Waste Water Effluents and the federal Wastewater System Effluent Regulations.

While full compliance with these revised standards will take some time, WSA's recent focus has been on bringing larger systems into compliance in an early timeframe, since larger systems treat and release more waste. Finally, in July 2015, Saskatchewan signed an agreement with Environment Canada to administer the federal Wastewater System Effluent Regulations in the province and is proceeding with those responsibilities.

Water Withdrawals

Saskatchewan's "A" grade for water withdrawals results from a conservative approach to allocation, aided by a relatively small population and limited water intensive industrial development. The long standing practice in Saskatchewan is to undertake an assessment of water sustainability or reliability at the time of allocation. Allocations for municipal or industrial users are based on a firm draft assessment. (How much water is available 100 per cent of the time). This is in contrast to other regulatory regimes that allocate based on median availability. (How much water is available 50 per cent of the time) That model then restricts use during a shortage by a system of prioritization. As a result, in Saskatchewan, more of the water present in any given year is left unallocated.

Outside of the major river systems Saskatchewan doesn't have water sources that lend themselves to intensive development without significant cost for infrastructure. As a result, the industry that has developed is either not a major user of water, or is reasonably efficient in its use to manage costs. We also don't have the population base to support the same scale of industrial development as some jurisdictions – for example, manufacturing in southern Ontario. Our province simply doesn't use as much water as other areas, and with a growing urban population and ever increasing infrastructure costs, we tend to use it efficiently.

Agency Goal - Safe and beneficial infrastructure

Strategy - Ensure appropriate dam safety and public benefits from WSA infrastructure

Key Actions and Results

Continue to implement the 10-year Water Management Infrastructure Renewal Plan to upgrade water management infrastructure

In 2016-17 the Agency invested \$17.7M in Water Management Infrastructure Renewal. The major projects include:

⇒ Continued rehabilitation of the M1 Canal

- ↳ In 2016/17 the Agency spent \$12.5M to successfully rehabilitate an additional 3.7 km of the M1 Canal and one of its major structures. To date 14.4 km of the 22.5 km long canal (64%) have been rehabilitated.

⇒ Rehabilitation of Zelma Dam

- ↳ In 2016/17 the Agency spent \$1.17 M to successfully rehabilitate the downstream slope of the main dam embankment and the riparian outlet. Although the downstream slope work was planned, it had to be accelerated following an inspection in May which reported the development of significant cracking and slumping on the downstream slope of the dam due to progressive erosion. Concerns with the stability of the downstream slope resulted in the recommendation to undertake remedial measures immediately. Remedial measures were underway in early June along with increased monitoring, surveys and inspections of the dam. Following the completion of remedial measures in early July, the cracking, slumping and erosion was repaired with the necessary protection provided to the dam. Owing to the success of the remedial measures, the threat to the safety of the dam was quickly and efficiently addressed.

⇒ Alameda Dam

- ↳ The Agency spent \$400K on Programmable Logic Controller (digital computer used for automation of electromechanical processes) upgrades at the Alameda low level outlet to increase operator safety and efficiency. Basin wall walkways were also installed to allow surveillance and increase operator and public safety.

⇒ Crooked Lake Dam

- ↳ The Agency spent \$511K and designed a control structure to replace the existing one which is beyond its expected service life. The replacement structure will be able to maintain the lake levels to which recreational users are accustomed, but will allow for safer and more timely operations than the previous structure.

⇒ Upper Qu'Appelle

- ↳ In 2016-17, the Agency spent \$900K to maintain the capacity of the water channel and to stabilize the channel between Lake Diefenbaker and Buffalo Pound Lake. Diverting water from Lake Diefenbaker via this channel provides

water supplies to approximately 25% of the province's population including the cities of Moose Jaw and Regina as well as a number of smaller communities. These water deliveries also support a number of industries including Yara Belle Plaine, Mosaic Belle Plaine, K+S Legacy mine and the Terra Grain Fuels ethanol plant, and significantly enhance recreational benefits/property values by assisting to stabilize the levels of eight lakes within the Qu'Appelle System.

The 10-year Water Management Infrastructure Renewal Plan is a living document and is updated on an ongoing basis as new knowledge of work deficiencies are identified and as upgrades are completed.

Continue to negotiate the transfer of nine federal dams to the Water Security Agency

⇒ On March 31, 2017, WSA accepted ownership and operation of 20 dams previously owned and operated by the Federal government. These dams were built by Canada through the Prairie Farm Rehabilitation Administration as part of regional drought-proofing beginning in the 1930s. Owning and operating these dams fits well with WSA's mandate, operations and responsibility for managing provincial water resources and related infrastructure. WSA is now one of only two corporations that own and operate significant dams in the province. SaskPower is the other. These dams will be included in the Agency's 2017-18 dam safety program.

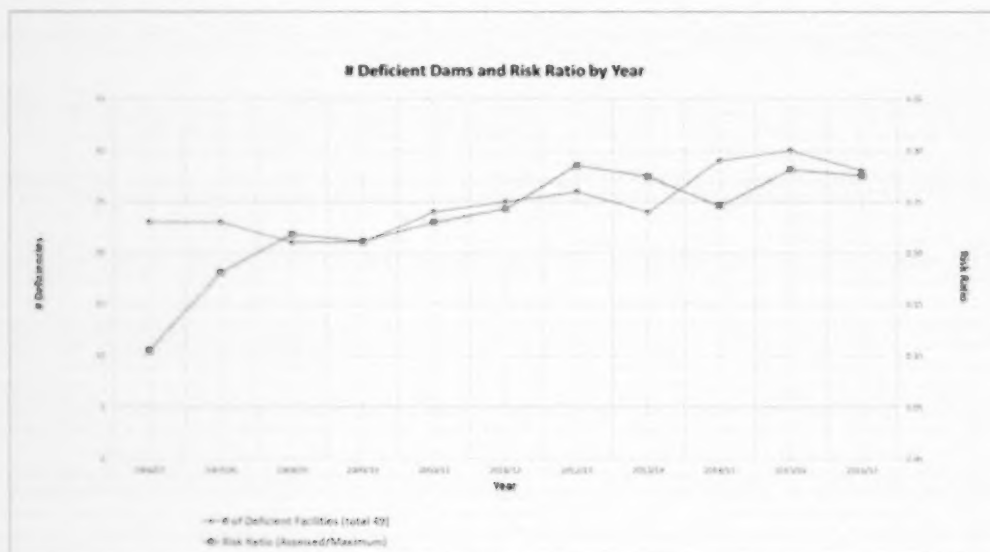
Performance Measures

Length of M1 Canal Rehabilitated

⇒ In 2016-17 WSA rehabilitated 3.7 km of the canal and one of its major structures. To date 14.4 km of the 22.5 km long canal (64%) have been rehabilitated. This 22.5 km canal supplies water from Lake Diefenbaker to Broderick Reservoir near Outlook and supports 55,000 acres of irrigation, six reservoirs, town and villages, three potash mines, 13 wetland projects and Blackstrap Provincial Park. Rehabilitation of the entire canal is planned to be complete in 2021 and will increase the canal's capacity by 52%.

Risk associated with WSA dams and number of WSA dams requiring upgrades

The 10-Year Water Management Infrastructure Renewal Plan is intended to decrease the risk associated with WSA dams and the number of WSA dams requiring upgrades.



Number of deficient dams

This measure quantifies the number of Water Security Agency dams which require upgrades to meet the provisions of the Dam Safety Guidelines (2007) published by the Canadian Dam Association. Like all provincial governments and major utilities across Canada, the Water Security Agency manages its works in general accordance with these guidelines. For 2016-17 the Water Security Agency was responsible for the operation and maintenance of 49 dams. At midnight on March 31, 2017, the Water Security Agency accepted ownership and operation of 20 more dams from the federal government. Those dams will be included in the risk measure calculated for 2017-18.

Depending upon the dam, a failure could have significant economic and safety consequences. However, unlike the risk ratio, this measure does not indicate the severity of the identified deficiencies. This measure is useful in gauging progress made over time to

reduce the number of deficient dams.

The Failure Probability of a Water Security Agency dam is assessed in terms of:

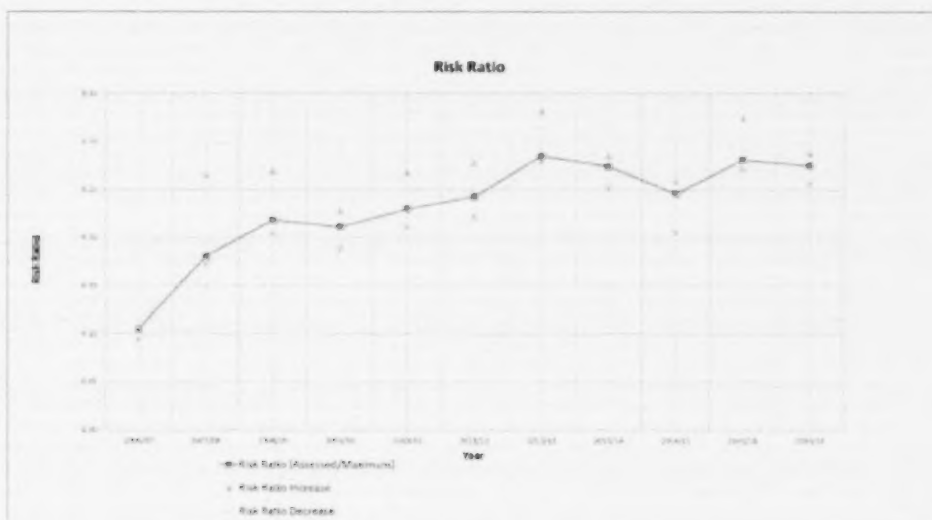
- (a) hydrology/hydraulic,
- (b) geotechnical, and
- (c) structural/electrical/mechanical condition rating factors.

These three rating factors vary from 0 (adequate) to 9 (grossly inadequate) for a maximum possible Failure Probability of 27.

A dam having at least one condition rating factor of three or greater is deemed to be a deficient dam. The information used to determine Failure Probability values comes from a variety of sources including: annual inspections; internal and external dam safety reviews; design and assessment studies; issue identification by site staff/project operators; and review of dam performance monitoring data.

The number of deficient dams decreased from 30 in 2015/16 to 28 in 2016/17. Four dams, including Zelma Dam, Avonlea Dam, Five Mile Dam and Teepee Creek Dam improved to non-deficient as a result of rehabilitation measures. However, two dams, Blackstrap South Dam and Candle Lake Dam changed status to deficient owing to ongoing and gradually worsening deficiencies.

Risk Ratio



This graph shows the risk associated with the Water Security Agency's dams by considering both the likelihood and the consequences of a dam failure. It is a measure of the safety of the dams and of progress in upgrading the dams to acceptable standards. A higher score indicates increased risk. The Water Security Agency uses the ratio of the assessed current risk to the total possible risk to establish targets and measure progress in reducing risk associated with its dams. Risk, defined as the probability of a failure multiplied by the consequences of a failure, has been assessed in relative values. The Assessed Current Risk is determined by multiplying the Failure Rating and the Consequence Rating for each structure.

The annual change in the Risk Ratio is also shown as an indicator of annual progress with capital projects.

Consequence ratings are assessed for each structure and based upon an estimation of life safety, economic damages and restoration costs in the case of a failure. A lower ratio indicates safer infrastructure, with a ratio of zero indicating no current assessed risk.

Numerically the risk ratio can be expressed as:

$$\text{Risk Ratio} = \frac{\sum \text{Assessed Current Risk}}{\sum \text{Total Possible Risk}}$$

The risk ratio decreased to 0.275 in 2016/17 from 0.281 in 2015/16 principally due to rehabilitation work completed at Avonlea Dam and Zelma Dam. There were increased failure probabilities at 16 of WSA's non-major dams due to internal inspections, assessments or continued deterioration. Decreased failure probabilities were observed at six dams due to rehabilitation measures or satisfactory results from dam safety inspections, assessments or analyses. Work plans for 2017/18 will continue to look at a number of key issues at WSA's dams.

Government Goals

Sustaining growth
and opportunities for
Saskatchewan people

Meeting the challenges
of growth

Securing a better quality
of life for all
Saskatchewan people

Delivering responsive
and responsible
government

Strategic priorities relate to the *Saskatchewan Plan for Growth* vision of "Growth with Purpose: Building a Better Quality of Life for Saskatchewan People" and *The 25 Year Saskatchewan Water Security Plan* goals of "Safe Drinking Water," "Protection of Water Resources," "Safe Dams," and "Flood and Drought Damage Reduction."

Agency Goal - Safe drinking water

Strategy - Ensure effective and sustainable water treatment and protection of drinking water resources

Key Actions and Results

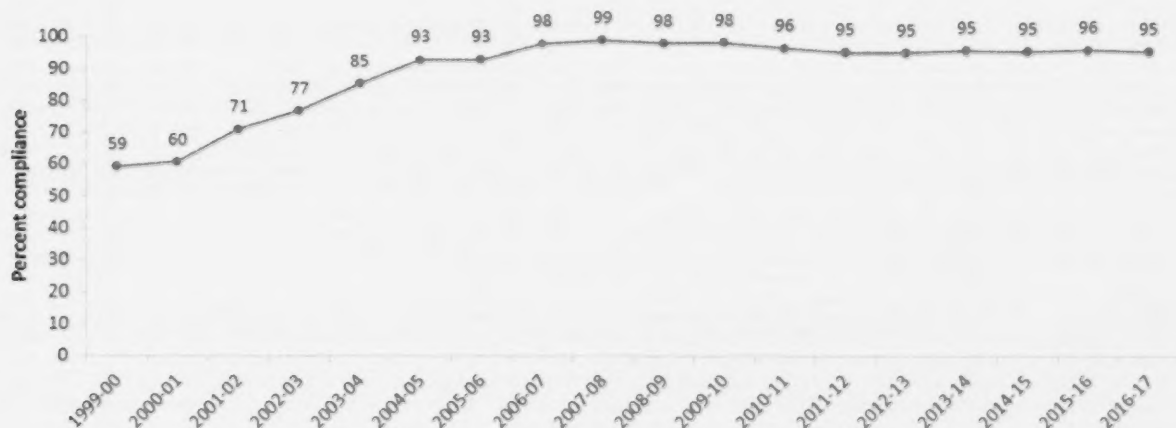
Continue to license and inspect drinking water systems, approve new construction, assist municipalities when problems develop, and take compliance action where appropriate

⇒ During 2016-17 the Agency:

- ⇒ Issued 105 permits to construct waterworks;
- ⇒ Granted 29 environmental code "notifications" for construction of water main systems in cities;
- ⇒ Issued, renewed, or amended 191 permits to operate waterworks;
- ⇒ Conducted 957 inspections of waterworks;
- ⇒ Issued 604 Precautionary Drinking Water Advisories and three Emergency Boil Water Orders for regulated waterworks that were affected by reportable upsets;
- ⇒ Issued 37 written compliance warnings in relation to operation or construction of waterworks; and
- ⇒ Laid two charges and obtained three convictions (some actions carry over from 2015-16) in relation to the operation of waterworks.

Performance Measures

Drinking water quality standards compliance



Source: Water Security Agency; SEEMS Database 2017

The drinking water quality compliance indicator is an average of compliance with disinfection and bacteriological standards, both of which measure compliance with drinking water quality standards. This indicator looks at both the results of bacteriological water quality monitoring and the level of disinfectant present in drinking water and is a good predictor of the safety of drinking water.

Compliance with drinking water quality standards for disinfection and bacteriological quality is important as microbial

contamination in water supplies can quickly result in significant illness. Proper disinfection is an important way to ensure safe drinking water and prevent the outbreak of waterborne diseases. The indicator reports on the actions of the Water Security Agency in addressing risks to the health of people and the environment and key actions related to ensuring safe and sustainable drinking water. The accuracy of this indicator is fully dependent on accurate testing and reporting by regulated waterworks operators.

The drinking water quality compliance indicator has been very good for the past few years and has remained relatively stable; with an average compliance rate of 95 per cent for the past five years. Ongoing inspection and education awareness initiatives with waterworks owners and operators are planned to sustain good performance in achieving water that is safe from bacteriological threats and meets disinfection standards.

Key risks to achieving this measure include an inability of waterworks owners or operators to comply with standards and operator certification requirements (such as a lack of staff, understanding, overall planning capacity or financial resources), catastrophic events that effect drinking water quality (such as major flooding or equipment failure) and new/evolving standards that change the base requirements.

Employees Recognized by Colleagues and Clients for Service Following Husky Energy Oil Spill

In July 2016 the Water Security Agency (WSA) had the opportunity to put its expertise in water quality to the test when a Husky Energy pipeline near Maidstone leaked approximately 225,000 litres of crude oil and distillate onto the banks and water of the North Saskatchewan River.

WSA employees worked closely with communities throughout the year to ensure drinking water quality. When the spill occurred they immediately contacted those communities to advise them of the spill and the need for precautions when drawing water from the river. They then began to gather more information on the volume, location and travel time for the spill.

In this type of situation, WSA has several roles. The Agency helped the affected communities find alternative sources of raw water and also helped with aquatic habitat protection permits and advice. WSA provided advice to the Incident Command (stationed in Lloydminster) and the environmental science committee set up by Incident Command. WSA employees monitored the rivers early in the event and for months following the event. WSA also reviewed engineering proposals for alternative supplies. Most importantly, WSA acted as regulator – WSA has the responsibility of ensuring safe drinking water.

WSA's hydrologists also played a key role. River levels were changing quickly in the days immediately after the spill because of heavy rains in Alberta. This made things difficult for everyone responding to the spill. In late August the river rose a metre and then fell. With the flood peak hitting, it became tricky to redeploy booms in the river to "catch" the oil. For instance, a boom would be placed and then a tree would sweep it out.

WSA's hydrologists also answered questions about how fast the oil would travel in the river. Communities using the river as a water source needed to know when to shut down their intakes.

Hydrologists and regional services employees worked together to identify Anglin Lake as an alternative water source and to increase flows from the lake into Little Red River to help Prince Albert until the city was able to get a line in place to the South Saskatchewan River.

In the days, weeks and months following the oil spill, the Water Security Agency maintained independent water sampling, posting the results regularly to the WSA's website (wsask.ca) and conducting conference calls with media.

The Water Security Agency recognized the 26 employees who made up the Oil Spill Response Team with a Serving Citizens Award, an internal culture award that goes to employees nominated by their colleagues for exceptional service to citizens. In September, James Smith Cree Nation issued a news release thanking Water Security Agency for providing an Aquatic Macroinvertebrate Ecologist to investigate dead aquatic life and for sampling water and foam. In October, Jim Toye, City Manager for Prince Albert wrote to Herb Cox, Minister Responsible for the Saskatchewan Water Security Agency at the time, thanking him for the support, time and effort the City received from WSA.

Agency Goal - Healthy water resources

Strategy - Sustain water quality and aquatic ecosystem function

Key Actions and Results

Administer the new federal Wastewater Systems Effluent Regulations (WSER) to provide a one window regulatory approach for municipal clients

- ⇒ During 2016-17 the Agency continued to administer the federal Wastewater System Effluent Regulations (WSER) for affected municipal waterworks in the province. As of March 31, 2017 approximately 66 systems require compliance with the Wastewater System Effluent Regulations (WSER) passed into law in July 2012 pursuant to the federal Fisheries Act. The final number of wastewater systems, which must be managed to the WSER standard, will be finalized once ongoing work on the administrative agreement between the Water Security Agency and Environment Canada is completed. That agreement was signed and came into effect in July 2015. In accordance with sewage works permit to operate requirements the City of Regina sewage treatment system upgrade reached significant completion in December 2016. This upgrade is anticipated to result in significant improvements in effluent and downstream water quality while bringing the city into very early compliance with the federal Wastewater System Effluent Regulations and preparations for future growth.

Continue to license and inspect wastewater systems, approve new construction, assist municipalities when problems develop, and take compliance action where appropriate

- ⇒ During 2016-17 the Agency:
- ⇒ Issued 59 permits to construct waterworks;
 - ⇒ Granted 27 environmental code "notifications" for construction of sewer main systems in cities;
 - ⇒ Issued renewed or amended 104 permits to operate sewage works;
 - ⇒ Conducted 563 inspections of sewage works; and
 - ⇒ Issued five written compliance warnings in relation to construction of sewage works without a permit.

Complete the three-year water quality study of the Qu'Appelle River system

- ⇒ Monitoring of water quality of the Qu'Appelle River system has been completed. WSA staff are currently reviewing the data and compiling a report on the findings and conclusions of that work.

Performance Measures

Number of sewage effluent discharges that represent a risk to source waters



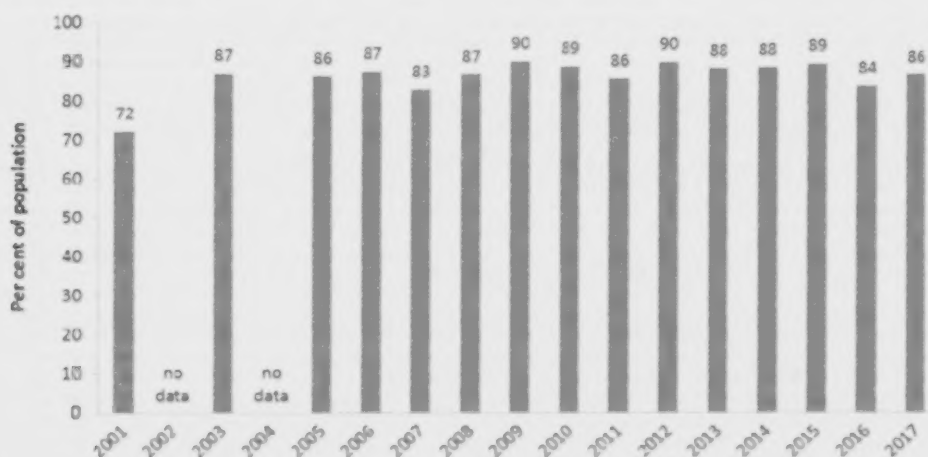
Source: Water Security Agency 2017

The number of sewage effluent discharges that represent a risk to source waters is a direct indication of the current potential for source water contamination due to poor wastewater treatment, overloaded systems, or systems with failing infrastructure. This measure is selected since it is the most direct measure of the number of potential significant contamination point sources affecting a range of water uses.

As of March 31, 2017, approximately 79 wastewater systems have been identified as having a discharge that may reach a surface water body and represent a risk to source waters under certain conditions. This is a reduction of seven systems since the previous fiscal year and likely results from greater focus on wastewater treatment system conditions and improvements in recent times.

Growth in Saskatchewan communities is also placing additional pressure on sewage infrastructure as some communities were at treatment and/or storage capacity. On an annual basis, Water Security Agency staff review the quality of effluent from each regulated sewage works. Reduction of ammonia and chlorine residual emissions within treated wastewater effluent, sewage works capacity or other treatment capability issues typically involve significant planning, investment and construction. Therefore, it can be expected that reductions in the number of works, which represent a risk to source waters, will be a time consuming process. Work to resolve problematic wastewater systems will continue for the foreseeable future.

Drinking water quality satisfaction



Source: Water Security Agency Polling Results, 2017

The Drinking Water Quality Satisfaction indicator is based on the results of annual polling of Saskatchewan residents on their level of confidence in the quality of their drinking water supply. The measure is the percentage of respondents who indicated that they are very or somewhat confident in the quality of their tap water. This indicator reflects upon the success of the Water Security Agency in advancing safe drinking water supplies across the province, including municipal supplies, pipelines and large commercial water systems.

The drinking water quality satisfaction indicator has been greater than 80 per cent since 2003.

Ongoing attention to actions such as consumer education efforts, waterworks inspections, media coverage of water contamination events affecting larger centres, implementation of water quality standards, water workshops and consumer notification will help to maintain a high level of public confidence in the safety of drinking water in the future.

Key risks to achieving this measure include:

- ⇒ lack of public knowledge about the effectiveness of drinking water quality compliance requirements and efforts;
- ⇒ major climatic events that impact base survey water quality and quantity (such as sustained droughts or major flooding); and
- ⇒ upsets or significant problems at a waterworks for a major centre in or beyond the province that may influence the confidence of a significant portion of population in Saskatchewan.

There is also some risk in how the survey is constructed (for instance, the order in which questions are asked and the possibility that other topics covered in the survey might influence the respondents' answers).

Agency Goal - Prevention of damage from flooding, excess moisture and drought.

Strategy - Ensure effective planning, damage prevention and response measures are in place to address flooding, excess moisture and drought.

Key Actions and Results

Deliver the Emergency Flood Damage Reduction Program (EFDPR) and continue to work to identify options for a national flood damage mitigation program

- ⇒ The EFDPR served 69 clients in 2016-2017 for a total of more than 3300 clients served since the program began in 2011. The program provided engineering and technical assistance at a cost totaling approximately \$530K and grants of approximately \$3M for temporary measures and to construct 19 permanent flood mitigation works.
- ⇒ Total permanent solutions constructed to date: 430.

Initiate closure of drainage works to reduce flood damages around the Quill Lakes

- ⇒ The Agency continues to work with landowners in two large drainage networks within the Quill Lakes Basin to bring unapproved drainage into compliance. Landowners have access to technical experts (Qualified Persons, or QPs) for assistance with agricultural water management. Responsible water management may require the control of water flows, involving the consolidation of water storage, or installation of control gates. If these options are not acceptable, the Agency works with the landowner towards closure of the unapproved drainage works.

Implement the new approach to agricultural water management

- ⇒ WSA is implementing the Agricultural Water Management Strategy which will move Saskatchewan toward responsible agricultural water management by streamlining the regulatory system, effectively addressing the risks associated with drainage in the approval process, and enabling development of sustainable drainage projects with more long-term certainty. WSA will be using the new application and review process, qualified persons and mitigation measures to achieve this.
- ⇒ Currently WSA is concentrating on priority areas in vulnerable basins, and processing other approval applications as they come into the system.
- ⇒ Water Stewardship Groups are actively assisting in the Agricultural Water Management Strategy, by being trained and working as qualified persons.
- ⇒ Policies, fact sheets and technical bulletins continue to be developed to support communication.

Develop a provincial hydrological drought strategy

- ⇒ There was limited progress on this in 2016-17.

Government Goals



Strategic priorities relate to The 25 Year Saskatchewan Water Security Plan goals of 'Adequate Data, Information and Knowledge' and 'Effective Governance and Engagement.'

Agency Goal - Adequate data, information and knowledge

Strategy - Collect, manage, and share the data, information and knowledge required to support good decision.

Key Actions

Upgrade hydrometric stations to real time reporting

- ⇒ Currently the Agency has 78 real time hydrometric stations which produce streamflow or water level data.
- ⇒ Since early 2016 WSA has upgraded 12 sites to real time and will upgrade two more in the summer of 2017.
- ⇒ This will leave 15 sites without real time capability.

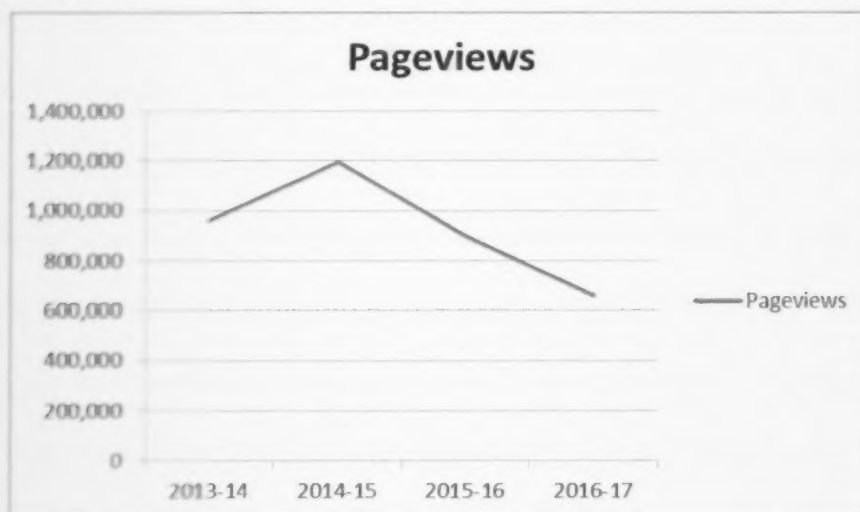
- ⇒ The Agency also uses real time hydrometric information from its partner in the hydrometric program, Water Survey of Canada, to manage water and prepare flow or water level forecasts.

Continue development of a water information portal on the WSA website using an interactive mapping system (GeoCortex)

- ⇒ In 2016-17 the Agency launched the Water Wells GIS site (gis.wsask.ca) which features an interactive map and all information on ground water wells across the province. This tool is the first layer of data that has been applied to the water information portal. Over time, all water information will be on an easily accessible and searchable interactive map.

Performance Measure

Water Security Agency website use



Visits to the Water Security Agency's website (wsask.ca) increase when Saskatchewan experiences high water and rainfall events. For instance, traffic to the site was high during the large flood event in eastern Saskatchewan in late June and early July of 2014. The site is an important source of information during an emergency and the Agency is committed to keeping information up-to-date, and easily accessible to mobile devices.

Agency Goal - Effective water governance and engagement

Strategy - Ensure water management and decision making processes are coordinated, comprehensive and collaborative.

Key Actions and Results

Continue negotiation of bilateral agreements with Alberta and Northwest Territories under the Mackenzie River Basin Agreement

- ⇒ In support of the Mackenzie River Basin Board, work is ongoing towards completing bilateral agreements.

Continue negotiation of a multilateral agreement with Alberta and Manitoba related to groundwater management, within the Prairie Provinces Water Board

- ⇒ Work is ongoing and includes definition of water quality objectives for surface water bodies and watercourses in the province, beginning with the highest priority systems and including work on key transboundary sites.

Consult on development of comprehensive water legislation

- ⇒ Out of nine acts and regulations to be renewed, four have been repealed and incorporated into the new Water Security Agency Regulations. Those four are: *The Water Power Act Regulations*, *The Saskatchewan Watershed Authority Regulations*, *The Residential Recreation Building Regulations*, and the *Reservoir Development Area Regulations*. Remaining acts and regulations to be renewed are: *The Water Power Act*, *The Water Security Agency Act*, *The Conservation and Development Area Authority Act*, and *The Watershed Association Act*. Review of these acts is underway but did not proceed to the consultation phase. Work on legislation continues in 2017-18.

A Winning Public Partnership: Watershed Stewardship Groups

Since 2003, the Water Security Agency has established 11 non-profit corporations to lead implementation of watershed protection plans developed by the Agency. (The majority of the province's population – 89 percent—lives in an area with a watershed protection plan.) The Agency provides one-third of the groups' total funding (\$3.2M total funding in 2016-17) as well as technical support. 123 volunteer board members govern the groups, which employ 18 full-time employees and 39 part-time employees. In total, 307 members belonged to the groups last year. In 2016-17, the watershed stewardship groups:

Provided education

- ⇒ 174 people attended 15 well decommissioning workshops. 141 applications for well decommissioning/wellhead protection were submitted through the Growing Forward program.
- ⇒ 103 presentations were made to 3,130 elementary and 434 high school students.
- ⇒ 500,000 watershed residents were reached through 91 newsletters, 175 presentations, 89 displays, and 25 radio spots.
- ⇒ 1605 people attended 36 Aquatic Invasive Species workshops. There were 54 dock inspections completed and 51 signs posted.

Developed source water protection plans

- ⇒ Three of the groups worked on developing source water protection plans for six communities and two First Nations. Thirteen projects assisted with implementing these and other source water protection plans.
- ⇒ Five of the groups participated in a source water protection extension program focused on small community drinking water systems, led by the Water Security Agency. This pilot project resulted in six communities committing to source water protection planning with four of the groups.

Assisted with the Agency's Agricultural Water Management Strategy

- ⇒ The groups assisted with 26 agricultural water management projects.

Agency Goal - Organizational excellence

Strategy - Ensure our organizational culture and practices support service excellence, innovation, collaboration, safety and accountability.

Key Actions and Results

Implement service standards for key front-line programs.

Service standards have been implemented for temporary water allocations and WSA is developing more understanding of customer expectations in order to determine satisfactory standards.

2016-17 Financial Overview

Water Security Agency operations resulted in a \$31.18M surplus this year. Budgeted surplus for the year was \$198,209. The budgeted surplus included \$200M in Federal government transfer funds, relating to the transfer of water control structures; the actual amount received was \$350M. On receipt of these funds, Water Security Agency made an unbudgeted transfer of \$350M to the Province of Saskatchewan General Revenue Fund.

Revenues were \$178.407M over budget. Water Security Agency received a one-time payment of \$350M for future operation, maintenance and upgrade of twenty water control structures transferred from Agriculture and Agri-Food Canada (AAFC). This revenue was \$150M over the budgeted amount of \$200M. The transferred assets were recorded as Tangible Capital Assets at AAFC's carrying amounts, with an unbudgeted \$28.762M recorded as revenue.

Expenses for regular operations, at \$38.233M, were \$8.193M below budget. Compliance and enforcement costs were lower than budgeted. Staff vacancies throughout the Water Security Agency resulted in a reduction in salary costs as well as reduced program activities and related costs. Restraint measures were taken due to anticipated lower operating revenues, including suspension of the water control program and elimination of the water pumping program.

In previous years, the Water Security Agency was provided \$67M in Emergency Flood Damage Reduction Program (EFDRP) funding, of which \$4.646M remained at March 31, 2016. The remaining funds covered the \$3.726M over budget EFDRP expenditures in 2016-17.

Management's Responsibility for the Financial Statements

The accompanying financial statements are the responsibility of management of Water Security Agency. Management maintains a system of accounting and administrative controls to ensure that accurate and reliable financial statements are prepared and to obtain reasonable assurance that transactions are authorized, assets are safeguarded and financial records are maintained.

These statements have been prepared in accordance with Canadian public sector accounting standards, using management's best estimates and judgement where appropriate.

Water Security Agency's external auditor, Deloitte LLP, expresses an independent opinion on these statements. Their report provides the scope of their audit and states their opinion.

The Water Security Agency Board has approved these financial statements. The Annual Report, which includes these financial statements, is tabled in the Legislative Assembly.

On behalf of the Water Security Agency,

Susan Ross
President

Joanne Shepherd
Director, Financial Services

WATER SECURITY AGENCY

FINANCIAL STATEMENTS

March 31, 2017

Independent Auditor's Report

To the Members of the Legislative Assembly
Province of Saskatchewan

We have audited the accompanying financial statements of the Water Security Agency, which comprise the statement of financial position as at March 31, 2017, and the statements of operations and accumulated surplus, change in net financial assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Water Security Agency as at March 31, 2017 and the results of its operations, changes in its net assets and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.



Chartered Professional Accountants
Licensed Professional Accountants

June 7, 2017
Regina, Saskatchewan

Member of Deloitte Touche Tohmatsu Limited

WATER SECURITY AGENCY
STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31
(\$ thousands)

	<u>2017</u>	<u>2016</u>
FINANCIAL ASSETS		
Cash	\$ 84,625	\$ 98,661
Accounts receivable	<u>10,450</u>	<u>8,909</u>
	<u>95,075</u>	<u>107,570</u>
LIABILITIES		
Accounts payable and accrued liabilities	7,316	7,011
Deferred revenue (Note 5)	392	392
Employee future benefits (Note 6)	970	997
Long-term debt (Note 7)	<u>42,476</u>	<u>47,678</u>
	<u>51,154</u>	<u>56,078</u>
NET FINANCIAL ASSETS	<u>43,921</u>	<u>51,492</u>
NON-FINANCIAL ASSETS		
Tangible capital assets (Note 8)	370,508	331,781
Prepaid expenses and supplies	<u>220</u>	<u>193</u>
	<u>370,728</u>	<u>331,974</u>
ACCUMULATED SURPLUS	<u>\$ 414,649</u>	<u>\$ 383,466</u>

Commitments and Contingencies (Note 10 and Note 14)

See accompanying notes

On behalf of the Board:



 Director

WATER SECURITY AGENCY
STATEMENT OF OPERATIONS AND ACCUMULATED SURPLUS
YEAR ENDED MARCH 31
(\$ thousands)

	2017		2016
	Budget (Note 13)	Actual	Actual
REVENUE			
Government of Saskatchewan			
- General Revenue Fund	\$ 18,255	\$ 18,255	\$ 18,477
Federal government transfer funds (Note 14)	200,000	350,000	-
Transfer of assets from federal government (Note 14)	-	28,762	-
Water revenue	23,610	22,400	19,908
Contract revenue (Schedule 1)	695	683	712
Other	2,175	3,042	2,436
	<u>244,735</u>	<u>423,142</u>	<u>41,533</u>
EXPENSES (Schedule 2)			
Corporate services	5,024	3,304	2,514
Legal, regulatory and aboriginal affairs	2,569	1,547	1,187
Water use and licensing	1,188	879	1,011
Integrated water services administration	517	1,163	875
Regional services	6,535	4,842	5,455
Watershed services	1,854	1,396	1,213
Technical and interjurisdictional services	755	625	1,250
Infrastructure management - engineering and dam safety	6,672	5,769	7,142
Hydrology and groundwater services	3,539	3,460	3,395
Drinking water and wastewater management	6,611	4,928	4,947
Water quality services	3,489	3,414	3,457
Interest	1,604	1,378	1,151
Amortization of tangible capital assets	6,069	5,528	5,121
	<u>46,426</u>	<u>38,233</u>	<u>38,718</u>
Surplus for the year, before the following	<u>198,309</u>	<u>384,909</u>	<u>2,815</u>
Revenue related to flood relief projects (Note 4)	2,000	2,826	3,359
Expenses related to flood relief projects (Note 4)	2,100	6,552	9,150
Deficit related to flood relief projects	<u>(100)</u>	<u>(3,726)</u>	<u>(5,791)</u>
Transfer to General Revenue Fund (Note 11)	-	350,000	-
Surplus (deficit) for the year	<u>198,209</u>	<u>31,183</u>	<u>(2,976)</u>
Accumulated surplus – beginning of year	<u>383,466</u>	<u>383,466</u>	<u>386,442</u>
Accumulated surplus – end of year	<u>\$ 581,675</u>	<u>\$ 414,649</u>	<u>\$ 383,466</u>
See accompanying notes			

WATER SECURITY AGENCY
STATEMENT OF CHANGE IN NET FINANCIAL ASSETS
YEAR ENDED MARCH 31
(\$ thousands)

	2017		2016
	Budget	Actual	Actual
	(Note 13)		
Surplus (deficit) for the year	\$ 198,209	\$ 31,183	\$ (2,976)
Acquisition of tangible capital assets	(21,732)	(15,496)	(14,885)
Transfer of assets from federal government (Note 14)	-	(28,762)	-
Amortization of tangible capital assets	6,069	5,528	5,121
Proceeds on sale of tangible capital assets	-	3	3
	<u>182,546</u>	<u>(7,544)</u>	<u>(12,737)</u>
Net consumption of prepaid expenses and supplies	-	(27)	121
Decrease in net financial assets	182,546	(7,571)	(12,616)
Net financial assets – beginning of year	<u>51,492</u>	<u>51,492</u>	<u>64,108</u>
Net financial assets – end of year	<u><u>\$ 234,038</u></u>	<u><u>\$ 43,921</u></u>	<u><u>\$ 51,492</u></u>

See accompanying notes

WATER SECURITY AGENCY
STATEMENT OF CASH FLOWS
YEAR ENDED MARCH 31
(\$ thousands)

	<u>2017</u>	<u>2016</u>
CASH PROVIDED BY (USED IN)		
OPERATING ACTIVITIES:		
Surplus (deficit) for the year	\$ 31,183	\$ (2,976)
Items not affecting cash:		
Amortization of tangible capital assets	5,528	5,121
Transfer of assets from federal government (Note 14)	(28,762)	-
Net change in non-cash balances relating to operations:		
Accounts receivable	(1,541)	13,475
Prepaid expenses and supplies	(27)	121
Accounts payable and accrued liabilities	305	(2,374)
Employee future benefits	(27)	(55)
Deferred revenue	-	392
	<u>6,659</u>	<u>13,704</u>
CAPITAL ACTIVITIES:		
Acquisition of tangible capital assets	(15,496)	(14,885)
Proceeds on sale of tangible capital assets	3	3
	<u>(15,493)</u>	<u>(14,882)</u>
FINANCING ACTIVITIES:		
Proceeds from loan payable	-	18,300
Principal portion of loan repaid in year	(5,202)	(3,857)
	<u>(5,202)</u>	<u>14,443</u>
(Decrease) increase in cash, during the year	(14,036)	13,265
Cash – beginning of year	98,661	85,396
Cash – end of year	<u>\$ 84,625</u>	<u>\$ 98,661</u>
See accompanying notes		

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

1. STATUS OF THE WATER SECURITY AGENCY

The Water Security Agency (WSA), which was originally established as the Saskatchewan Watershed Authority on October 1, 2002, was continued under **The Water Security Agency Act**, on October 1, 2012. It is a Treasury Board Crown corporation within the meaning of **The Crown Corporations Act, 1993**.

WSA is mandated to integrate all aspects of provincial water management to ensure water supplies support economic growth, quality of life and environmental well being. WSA supports protection of drinking water, flood and drought response, and management of water supplies, water quality and aquatic habitat. WSA owns and operates provincial dams and water supply channels.

2. SIGNIFICANT ACCOUNTING POLICIES

These financial statements have been prepared in accordance with Canadian public sector accounting standards. The following accounting standards are considered to be significant:

Tangible Capital Assets

Tangible capital assets are recorded at cost. Internally provided engineering and technical services are capitalized at charge out rates designed to recover salaries, benefits and overhead. The objective of this policy is to recognize the approximate value of design, supervision and administrative services rendered by WSA employees on construction projects. As well, WSA capitalizes interest expense on debt relating to specific construction projects. Amortization of assets under development commences once they are operational and available for use. Water infrastructure assets include land and earthen dams, which are not amortized because they do not degrade over time, if adequately maintained.

Charges for amortization are calculated at the following annual rates:

Leasehold improvements	straight-line over term of lease	
Buildings	straight-line	4%
Maintenance equipment	diminishing balance or straight-line, as appropriate	15% to 30%
Office equipment	straight-line	10% to 50%
Water infrastructure	straight-line	1.67% to 20%

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue Recognition

Government transfers are recognized as revenue in the period during which the transfer is authorized and eligibility criteria are met, except when and to the extent that the transfer stipulations give rise to an obligation that meets the definition of a liability.

Contractual revenue received by WSA for specific purposes is recognized as revenue in the year in which the related expenses are incurred. Water revenue is recognized as revenue in the year it is consumed. Other revenue includes: licenses, fees, permits, interest income and a service contract with Saskatchewan Water Corporation. These revenues are recognized in the year they are earned.

Grants to Clients

Grants provided to clients for a variety of programs are recorded as an expense to WSA, when any eligibility criteria have been met and final approval for the grant payment is made. Where WSA enters into contractual agreements for project construction under various assistance programs, expenses are accounted for on an accrual basis.

Employee Future Benefits

WSA administers a benefit relating to a retirement allowance which is paid to eligible employees upon retirement. WSA has adopted the accrual method of accounting for this benefit whereby the cost of providing the benefits is recorded when the related services of employees are performed. WSA's employees participate in the Public Employees Pension Plan which is a multi-employer contribution plan. WSA's contributions to the pension plan are expensed as incurred.

Measurement Uncertainty

The preparation of financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenditures during the reporting period. Significant areas requiring the use of management estimates relate to the useful lives of assets for amortization periods and employee future benefits.

Financial Instruments

All financial instruments are initially recognized at fair value. The fair value of a financial instrument is the amount of consideration that would be agreed upon in an arm's-length transaction between knowledgeable, willing parties who are under no compulsion to act. The carrying amounts of these instruments approximates fair value due to their short-term nature.

Remeasurement Gains and Losses

These financial statements do not include a Statement of Remeasurement Gains and Losses as WSA has had no gains or losses due to remeasurement.

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

3. NEW STANDARDS AND AMENDMENTS TO STANDARDS

WSA has early adopted PS 3430 Restructuring Transactions regarding the accounting and reporting of assets and liabilities in restructuring transactions. This standard was applied prospectively therefore the recording of similar transactions in prior years has not been adjusted. The impact of the adoption of this new standard is disclosed in Note 14.

A number of new standards and amendments to standards which may impact the Agency are not yet effective for the year ended March 31, 2017, and have not been applied in preparing these financial statements. The following new standards and amendments to standards are effective for financial statements on or after April 1, 2017:

- PS 2200 Related party disclosures
- PS 3420 Inter-entity transactions
- PS 3210 Assets
- PS 3320 Contingent Assets
- PS 3380 Contractual Rights

The following new standards and amendments to standards are effective for financial statements on or after April 1, 2019:

- PS 2601 Foreign Currency Translation
- PS 1201 Financial Statement Presentation
- PS 3041 Portfolio Investments
- PS 3450 Financial Instruments

The extent of the impact on adoption of these standards is not known at this time.

4. FLOOD RELIEF PROJECTS

In 2011, an "Emergency Flood Damage Reduction Program" (EFDRP) was implemented by the Province to provide, on a cost-shared basis, funding to assist individuals and communities with flood preparation. WSA was allocated the funds to lead this program on behalf of the Province and flooding issues have been ongoing. In fiscal 2017, \$2 million was provided from the General Revenue Fund for the 2016 flood program. WSA is reimbursed by Aboriginal Affairs and Northern Development Canada (AANDC) for assistance provided to First Nations to combat flood damage. WSA is also leading the work, on behalf of the Province, related to long-term solutions to flooding at Fishing and Waldsea Lakes.

WSA recognized the following funding for flood relief initiatives:

	2017	2016
General Revenue Fund - Emergency Flood Damage Reduction	\$ 2,000	\$ 2,000
Aboriginal Affairs and Northern Development Canada	826	1,359
	<u>\$ 2,826</u>	<u>\$ 3,359</u>

WSA recognized the following expenses for flood relief initiatives:

	2017	2016
Emergency Flood Damage Reduction Program	\$ 3,751	\$ 5,061
Fishing and Waldsea Lakes	1,791	2,994
Aboriginal Affairs and Northern Development Canada	1,010	1,095
	<u>\$ 6,552</u>	<u>\$ 9,150</u>

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

5. DEFERRED REVENUE

	<u>2017</u>	<u>2016</u>
Balance, beginning of year	\$ 392	\$ -
Fees collected	392	392
Recognition of prior year deferred revenue	(392)	-
Balance, end of year	<u>\$ 392</u>	<u>\$ 392</u>

6. EMPLOYEE FUTURE BENEFITS

The amounts related to the defined benefit retiring allowance are as follows:

	<u>2017</u>	<u>2016</u>
Accrued benefit liability	\$ 970	\$ 997
Benefits paid during the year	\$ 139	\$ 145
Net expense	\$ 113	\$ 91

The significant actuarial assumptions adopted in measuring WSA's accrued benefit liability at March 31 are:

	<u>2017</u>	<u>2016</u>
Discount rate	3.10%	3.20%
Inflation rate	2.25%	2.50%
Salary increase	2.00%	2.00%
Average remaining service life	10.8 years	11.0 years

For 2016 and 2017, the mortality assumption is based on the 2014 Canadian Pensioner Mortality Table (CPM2014) using the CPM Improvement Scale B, for the private sector without size adjustment factors.

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

7. LONG-TERM DEBT

	<u>2017</u>	<u>2016</u>
Conexus Credit Union 2006 - ten year loan bearing interest at 3.98% per annum, due March, 2021	\$ 1,210	\$ 1,484
Bank of Montreal - ten year loan bearing interest at 3.40% per annum, due March, 2022	2,231	2,634
TD Commercial Banking - ten year loan bearing interest at 2.65%, due November, 2022	4,009	4,656
National Bank of Canada - ten year loan bearing interest at 3.51%, due December, 2023	6,420	7,260
Bank of Montreal - ten year loan bearing interest at 3.03% per annum, due December, 2024	12,331	13,741
TD Commercial Banking - ten year loan bearing interest at 2.69%, due November, 2025	16,275	17,903
Total Debt	<u>\$ 42,476</u>	<u>\$ 47,678</u>

Long-term debt repayments in each of the next five years are as follows:

2018	\$ 5,361
2019	5,526
2020	5,695
2021	5,871
2022	5,718
Thereafter	14,305
	<u>\$ 42,476</u>

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

8. TANGIBLE CAPITAL ASSETS

Cost	Land	Buildings and leasehold improvements	Maintenance equipment	Office equipment	Water infrastructure	Total
Balance, March 31, 2016	\$ 5,155	\$ 1,858	\$ 4,129	\$ 2,235	\$ 439,277	\$ 452,654
Additions (Note 14)	-	-	139	204	43,915	44,258
Disposals	-	-	(3)	-	-	(3)
Balance, March 31, 2017	\$ 5,155	\$ 1,858	\$ 4,265	\$ 2,439	\$ 483,192	\$ 496,909

Accumulated Amortization	Land	Buildings and leasehold improvements	Maintenance equipment	Office equipment	Water infrastructure	Total
Balance, March 31, 2016	\$ -	\$ 1,296	\$ 3,170	\$ 1,817	\$ 114,590	\$ 120,873
Amortization	-	175	331	169	4,853	5,528
Disposals	-	-	-	-	-	-
Balance, March 31, 2017	\$ -	\$ 1,471	\$ 3,501	\$ 1,986	\$ 119,443	\$ 126,401

Net Book Value	Land	Buildings and leasehold improvements	Maintenance equipment	Office equipment	Water infrastructure	Total
Balance, March 31, 2016	\$ 5,155	\$ 562	\$ 959	\$ 418	\$ 324,687	\$ 331,781
Balance, March 31, 2017	\$ 5,155	\$ 387	\$ 764	\$ 453	\$ 363,749	\$ 370,508

Included in tangible capital assets are assets under construction worth \$6,695 (2016 - \$7,288).

9. GRANTS TO CLIENTS

Included in expenses are grants or assistance provided to various persons and organizations to carry out a variety of programs administered by WSA. Particulars of these grants, by program, are as follows:

	2017	2016
Flood Control and Drainage	\$ 393	\$ 1,025
Emergency Flood Damage Reduction Program	2,990	3,567
Watershed Implementation and Projects	842	1,146
Stewardship - Water Quality	123	513
	<u>\$ 4,348</u>	<u>\$ 6,251</u>

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

10. COMMITMENTS AND CONTINGENCIES

Contractual Commitments

As of March 31, 2017, WSA has outstanding commitments of \$5,599 (2016 - \$14,009) for construction contracts, consulting agreements, software licensing, watershed funding agreements and other services. Within various contractual agreements, WSA has committed to provide in-kind services. If contracts were terminated, WSA's only liability would be for actual costs incurred to date.

Included in total commitments is \$968 in funding commitments for Flood Relief projects that may be paid out to communities and other entities where costs have been incurred related to flooding.

Leases

WSA has entered into various operating lease agreements with the following minimum lease payments:

2018	\$ 1,763
2019	1,707
2020	1,260
2021	938
2022	705
	<u>\$ 6,373</u>

Litigation

Water Security Agency is party to fifteen lawsuits (2016 - fifteen), related to various water management issues. The outcome of these lawsuits cannot be determined therefore no amounts have been allowed for settlement in these statements.

11. RELATED PARTY TRANSACTIONS

Included in these financial statements are transactions with various Saskatchewan Crown corporations, ministries, agencies, boards and commissions related to WSA by virtue of common control by the Government of Saskatchewan and non-Crown corporations and enterprises subject to joint control or significant influence by the Government of Saskatchewan (collectively referred to as "related parties").

Routine operating transactions with related parties are settled at prevailing market prices under normal trade terms. These transactions and amounts outstanding at year end, are as follows:

	<u>2017</u>	<u>2016</u>
Water, contract and other revenue	\$ 20,198	\$ 17,491
Purchases	5,455	3,593
Transfer to Government of Saskatchewan - General Revenue Fund	350,000	-
Accounts receivable	6,845	5,111
Accounts payable	526	828

Details of amounts and transactions due to and from related parties and the terms of settlement are described separately in these financial statements and the notes thereto.

WATER SECURITY AGENCY
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2017
(\$ thousands)

12. PENSION PLAN

During the year, WSA's employees participated in the Public Employees Pension Plan (the Plan), which is a defined contribution pension plan. WSA's contributions to the Plan included making regular payments into the Plan. The total amount paid into the Plan for 2017 was \$1,258 (2016 - \$1,217).

13. BUDGET FIGURES

The budget figures are presented for comparison purposes. WSA's Board of Directors approved the 2017 budget on May 26, 2016.

14. FEDERAL GOVERNMENT TRANSFER FUNDS AND ASSETS

On March 31, 2017, twenty water management structures (dams and associated infrastructure land, headworks and buildings) were transferred to WSA from Agriculture and Agri-Food Canada (AAFC - a Federal Government agency). The *Saskatchewan Natural Resources Act* transferred control of natural resources in Saskatchewan from Canada to the Province of Saskatchewan. AAFC's long-term initiative is to transfer the administration and control of water management infrastructure in Saskatchewan.

WSA received one-time funding for future operation, maintenance and upgrade of these structures, in the amount of \$350 million, which has been recognized as revenue in the 2016-17 fiscal year. On receipt of the funds, WSA transferred the \$350 million to the Government of Saskatchewan General Revenue Fund.

WSA has early adopted Public Sector Accounting Standard 3430 regarding recognition of assets and liabilities in restructuring transactions. This standard is to be applied prospectively therefore the recording of similar transactions in prior years has not been adjusted. The transferred assets have been recorded as Tangible Capital Assets, recognized at AAFC's carrying amounts at the time of the transfer, totaling \$28.762 million. This amount has been recognized as revenue at March 31, 2017.

With the transfer of responsibility for operation and maintenance of the structures, WSA assumed \$0.942 million in engineering and construction contractual obligations.

15. FINANCIAL INSTRUMENTS

WSA's financial assets consist of cash and accounts receivables. Financial liabilities consist of accounts payable and accrued liabilities, employee future benefits, deferred revenue and long-term debt.

Credit risk

WSA is exposed to credit risk from the potential non-payment of accounts receivable. The carrying amount of accounts receivable represents WSA's maximum credit exposure. The allowance for doubtful accounts is \$nil (2016 - \$nil).

Liquidity risk

Liquidity risk is the risk that WSA will not be able to meet its financial obligations as they become due. WSA monitors its cash balances and cash flows from operations to meet its requirements.

Interest rate risk

WSA is exposed to interest rate risk on its fixed rate long-term debt. The fixed rate instruments subject WSA to a fair value risk due to interest rate fluctuations in the market.

**WATER SECURITY AGENCY
Schedule 1 - Contract Revenue**

**Year Ended March 31
(\$ thousands)**

	<u>2017</u>	<u>2016</u>
Canadian Wildlife Service	\$ 212	\$ 395
Saskatchewan Wildlife Federation	250	-
Environment Canada	85	224
Wildlife Habitat Canada	36	43
Ducks Unlimited Canada	100	50
	<u>\$ 683</u>	<u>\$ 712</u>

WATER SECURITY AGENCY

Schedule 2 - Expenses by Program
Year ended March 31
(\$ thousands)

	Corporate services	Legal, regulatory and aboriginal affairs	Water use and licensing	Integrated water services administration	Regional services	Water shed services	Technical and interjurisdictional services	Infrastructure management	Hydrology and groundwater services	Drinking & wastewater management	Water quality services	Interest & amortization	2017	2016
													Total	Total
Salaries and benefits	\$ 3,810	\$ 1,140	\$ 776	\$ 172	\$ 3,153	\$ 423	\$ 288	\$ 3,357	\$ 2,014	\$ 3,279	\$ 1,951	\$ -	\$ 20,363	\$ 19,641
Travel and other staff costs	317	39	13	55	188	20	62	300	172	283	164	-	1,613	1,531
Professional services	225	328	-	344	2	90	48	522	55	78	674	-	2,366	4,067
Office supplies	947	11	6	10	78	6	5	53	29	44	29	-	1,218	1,420
Materials	3	-	-	-	2	-	-	100	19	13	19	-	156	204
Contractual services	14	29	-	40	99	2	98	212	823	374	-	-	1,691	2,401
Cash grants	-	-	-	-	393	820	-	-	-	-	146	-	1,359	2,485
Salary allocations	(3,657)	(5)	52	523	484	27	56	1,072	385	823	209	-	(31)	(1,379)
Other expenses	1,645	5	32	19	443	8	68	153	(37)	34	222	6,906	9,498	8,148
Total	\$ 3,304	\$ 1,547	\$ 879	\$ 1,163	\$ 4,842	\$ 1,396	\$ 625	\$ 5,769	\$ 3,460	\$ 4,928	\$ 3,414	\$ 6,906	\$ 38,233	\$ 38,718

For More Information

More detailed information can be obtained by visiting the Water Security Agency's website at www.wsask.ca, calling its head office in Moose Jaw at 306-694-3900, or contacting the water inquiry line toll free at 1-866-SASK-H2O (1-866-727-5420) or SaskH2O.ca.

Appendix A

25 Year Saskatchewan Water Security Plan Report for 2016-17

Action Number	Action Description
1.1a	Promote adoption of best conservation and efficiency practices and technology through education, regulations, water licence conditions and new programming Completion Target Year: Abandoned LEAD AGENCY: Water Security Agency Update: WSA is developing a new water allocation policy which will provide guidance on water licensing conditions around efficient water use.
1.1b	Investigate pricing strategies as a means of promoting water conservation Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: This work is proceeding as part of the new allocation policy, which is expected to be completed in 2017-18.
1.1c	Work with partners to promote research and development of innovative technology that improves the efficient use of water Completion Target Year: Abandoned LEAD AGENCY: Water Security Agency Update: This action was abandoned in Spring 2015.
1.2a	Evaluate existing water supplies and future demands for the next 25 years and beyond to determine the need for new infrastructure across the province Completion Target Year: 2016 and Ongoing LEAD AGENCY: Water Security Agency Update: The Upper Qu'Appelle model and the Water Resources Management Model (WRMM) have been developed. Evaluated Lake Diefenbaker, the Qu'Appelle supply and Lake Souris. Report in draft form.
1.2b	Investigate alternative measures to increase the delivery of water from Lake Diefenbaker to Buffalo Pound Lake, including evaluation of the feasibility of the Qu'Appelle South irrigation project Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Completed in 2014-15.
1.2c	Examine alternative ways of instituting the concept of "user-pay" with respect to the development of additional provincially owned, multi-purpose water supply infrastructure Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed in 2014-15.

Action Number	Action Description
1.3a	Develop a modern system of water allocation, including a new allocation policy and regulations Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Work on allocation policy is continuing and expected to be completed in 2016-17.
1.3b	Review existing water rights licences and assess current water use Completion Target Year: 2014 (priority)/2016 (other) LEAD AGENCY: Water Security Agency Update: Northwest and Eastcentral files have been reviewed. Northeast files are under review. Southwest file review process is in development and Southeast files are pending.
1.3c	By watershed, determine the existing use of water, level of protection of environmental flows, how much water is available for future allocation, and identify areas where water scarcity may be a factor Completion Target Year: 2014(priority)/2016 (other) LEAD AGENCY: Water Security Agency Update: Water use data is collected and compiled annually with the ability to report use by watershed as well as by sector. Development of standard reporting products for use in internal and external communication is ongoing with the Communications Unit.
1.4a	Work with Canada to continue to assess and seek funding support for further irrigation opportunities Completion Target Year: Ongoing LEAD AGENCY: Ministry of Agriculture Update: Growing Forward 2 programming was accessed and funds were paid out for irrigation development (From 2013-present \$15.9 million between irrigation districts and non-irrigation districts) and adoption of irrigation best management practices (\$124,000).
1.4b	Develop an irrigation strategy that prioritizes opportunities for infill and new irrigation projects for development and assess the need for irrigation infrastructure rehabilitation Completion Target Year: 2014 LEAD AGENCY: Ministry of Agriculture Update: Completed in 2014. The Ministry of Agriculture hosted an irrigation stakeholder meeting in November 2015 to obtain industry feedback. The Ministry plans to keep the irrigation strategy current through ongoing dialogue with the irrigation industry and incorporating revisions, where possible, while maintaining strategy ownership.
1.4c	Work with Canada to transfer ownership of federal irrigation projects to local patrons Completion Target Year: 2017 LEAD AGENCY: Ministry of Agriculture Update: Discussions with Federal-Provincial governments on the transfer of the ownership of federal irrigation projects to local patrons continue.
1.4d	Develop new criteria for allocation licensing based on best practices and new technologies to sustainably support irrigation Completion Target Year: 2016 LEAD AGENCY: Ministry of Agriculture Update: The criteria are expected to be finalized along with completion of the Value for Water study and new Water Security Agency legislation.

Action Number	Action Description
1.5a	Continue work with research partners on climate change impacts to identify possibilities for adaptation Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Research on Lake Diefenbaker water quality, which incorporates climate change, is continuing. Planning work on increasing the outflow at the spillway on Rafferty Dam.
1.6a	Develop detailed aquifer maps Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Rather than focusing on maps, the Agency is focusing on describing and understanding individual aquifers (i.e. characteristics, flow dynamics, etc.) as opposed to mapping the spatial extent and distribution of the groundwater resources.
1.6b	Analyze the water supply situation in the major rivers Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Looking at both long term and short term supply. Recently analyzed the Swift Current River. Most of the work is done and this will be complete when we have communicated the results.
1.6c	Determine the existing water use by sector and delineated by the major basin Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed in 2013-14.
1.6d	Examine projected water demand by sector within major basins to the year 2060 Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed in 2013-14.
1.6e	Identify environmental flows to support the aquatic ecosystem Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed. Survey results shared with Southwest region and implications for water management discussed.
1.7a	Determine economic value of water in alternative uses Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed. A final report has been received and will be incorporated into the development of an allocation policy.
1.7b	Assess how the economic value of water could be used in allocation decision making Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed. Final report has been received and will be incorporated into the development of allocation policy.

Action Number	Action Description
2.1a	Review and update the province's approach to safe drinking water, including consideration of the 2002 Laing Report and the 2002 Safe Drinking Water Strategy Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Two-thirds complete.
2.1b	Investigate and encourage opportunities for regional water treatment plants and distribution pipelines to increase access to, and protection of, high quality drinking water Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: The Agency has met with SaskWater and SaskWater is promoting opportunities within their plan.
2.1c	Evaluate the financial needs of communities for operation, maintenance and renewal of water infrastructure Completion Target Year: 2014 LEAD AGENCY: Ministry of Government Relations Update: Completed. During 2015, Water Security Agency required 188 municipalities to do assessments of their waterworks. The assessment included examination of the financial viability of drinking water systems including: annual operation and maintenance costs of the municipal waterworks, an estimate of the capital replacement costs of any major system components that are expected to require replacement within the next 10 years, approximate cost estimates for anticipated non-routine maintenance, upgrades or expansions, and recommendations of appropriate water rates to meet future costs. Waterworks system assessment on smaller systems were completed in previous years.
2.1d	Develop a strategy to encourage communities to renew drinking water infrastructure Completion Target Year: 2015 LEAD AGENCY: Ministry of Government Relations Update: The province has committed to being a funding partner under the federal New Building Canada Fund and Clean Water and Wastewater Fund. In 2016-17 Saskatchewan has announced provincial funding for 30 projects that have a municipal drinking water component with total project costs of \$122.6 million. Drinking water infrastructure renewal will also be supported through the federal Gas Tax Fund. Municipalities are also able to utilize unconditional Municipal Revenue Sharing funds for infrastructure projects, at their discretion. Priority northern municipal water projects continue to be addressed with project management support from SaskWater. The Northern Water and Sewer Program provided funding to upgrade water and sewer systems in northern communities. Northern water and wastewater projects are also receiving funding under the New Building Canada Fund and Clean Water and Wastewater Fund.
2.1e	Assess, with federal and First Nations governments, opportunities for the province to provide infrastructure, including connections to regional water systems, and technical and inspection services on reserves on a cost-recovery basis Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Information and assessment of the option for provision of drinking water via regional infrastructure is performed during meetings, public events and interaction with First Nations as well as during general educational efforts on safe drinking water. WSA will be evaluating the provision of inspection services as regulations are developed pursuant to The Safe Drinking Water for First Nations Act. Consideration of possible regulation of the Whitecap Dakota First Nation water and sewage works at the request of the First Nation and met with the First Nation in the third quarter of 2015-16. WSA provided information on regulatory implementation costs to Indigenous and Northern Affairs Canada (INAC) in the fourth quarter of 2015-16. Federal administration may be changing the regulatory development processes for safe drinking water on First Nation's related regulations.

Action Number	Action Description
2.2a	Review and rationalize the regulatory regime applying to semi-public systems Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Some consideration of this is being incorporated into the review for item 2.1.
2.2b	Support research on water treatment technologies for point of use water systems Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Final report on the Coteau Hills Rural Water Pipeline was received. Trial POE system failed to meet turbidity requirements. Currently considering what other options are feasible for provision of potable water to those served by raw water pipelines.
2.3a	Implement an effective education and information strategy to raise awareness of drinking water safety issues, including information on proper well management, system operation and maintenance, water quality testing, and identification of and solutions for groundwater quality problems Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Seven factsheets and 48 publications related to drinking and wastewater management were updated in 2016-17. Applications for approval to operate and construct waterworks and sewage works were revised and posted and are now in use. Revised Operator Certification Standards came into effect on December 4, 2016 and are now being implemented as a means to guide operator certification decisions in Saskatchewan.
2.3b	Encourage testing of private water supplies, including testing for heavy metals Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Behind schedule. Anticipate progress over next several quarters.
2.3c	Provide water testing and treatment advice in at risk locations during emergency events such as flooding that pose a high risk of drinking water contamination Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: During the Husky Energy oil spill into the North Saskatchewan River, conducted water quality sampling, provided advice to affected municipalities as to when to close their intakes, provided advice and direction on use of alternative sources while intakes were closed, reviewed WSA and Husky collected water quality data as well as Husky's HHRA report to determine when intakes could be redeployed. Also altered affected municipal Permits to Operate monitoring schedules to ensure water quality provided to consumers.
3.1a	Evaluate the status of existing municipal wastewater facilities to determine needs for upgrades Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Completed. WSA completed a technical assessment of the status and capacity of all regulated wastewater systems in Saskatchewan in 2015-16. Also completed evaluation of risk assessments for wastewater systems subject to the Wastewater System Effluent Regulations and the Canadian Council of Ministers of the Environment Canada-wide Strategy for Municipal Wastewater Effluents. Tracked the status of municipal wastewater facility for compliance with standards as a means to direct needed upgrading priorities.

Action Number	Action Description
3.1b	Develop an agreement with Environment Canada for coordinated implementation of the Canadian Council of Ministers of the Environment Municipal Waste Water Effluent Canada-Wide Strategy and the Federal Wastewater System Effluent Regulations Completion Target Year: 2013 LEAD AGENCY: Water Security Agency Update: Completed. As of July 2015, an agreement was in place with Environment Canada for WSA to deliver the Wastewater System Effluent Regulations in Saskatchewan. Two coordination committee meetings were held with Environment Canada and implementation under the agreement will continue.
3.1c	Develop a strategy to encourage the renewal of municipal wastewater treatment infrastructure to ensure protection of water quality in receiving water bodies Completion Target Year: 2015 LEAD AGENCY: Ministry of Government Relations Update: The province has committed to being a funding partner under the federal New Building Canada Fund and Clean Water and Wastewater Fund. In 2016-17 Saskatchewan has announced provincial funding for 22 projects that have a municipal wastewater component with total project costs of \$122 million. Wastewater infrastructure renewal will also be supported through the federal Gas Tax Fund. Municipalities are also able to utilize unconditional Municipal Revenue Sharing funds for infrastructure projects, at their discretion. Priority northern municipal water projects continue to be addressed with project management support from SaskWater. The Northern Water and Sewer Program provided funding to upgrade water and sewer systems in northern communities. Northern water and wastewater projects are also receiving funding under the New Building Canada Fund and Clean Water and Wastewater Fund.
3.1d	Develop coordinated policies to reduce risk of water contamination that may result from residential wastewater management in high density rural developments and cottage subdivisions Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Some progress has been made in policy discussions with Government Relations with regard to application of needs for proper communal wastewater treatment systems in communal settings. Requirements for engineered communal sewage works are now being included through subdivision based developments.
3.1e	Define water quality objectives, including nutrient-related objectives, for surface water bodies and watercourses in the province, beginning with the highest priority systems and including work on key transboundary sites Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Ongoing work.
3.1f	Implement a recreational lake water quality monitoring program for swimming areas at lakes across the province Completion Target Year: 2014 LEAD AGENCY: Ministry of Health Update: Completed. Base program is now considered to be implemented and will be delivered on annual bases.

Action Number	Action Description
3.1g	Provide information and encourage the implementation of beneficial land and water management practices to reduce non-point sources of nutrients and other contaminants to surface and groundwater Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Provided training and coordination of WSA support to field delivery of MOA-led Growing Forward 2 (GF2), water-related BMP programming through Agrologist on staff. Coordinated WSA policy & technical input into MOA-led development of next iteration of GF2. Provided grant administration, technical advice, training, performance monitoring and reporting services to 11 Watershed Stewardship Groups as primary delivery model for GF2.
3.1h	Complete the Boreal Watershed Initiative Completion Target Year: 2016 LEAD AGENCY: Ministry of Environment Update: In 2015-16, the Ministry of Environment concluded a five-year study assessing the health of watersheds in northern Saskatchewan, which paints an overall positive picture for the province's Boreal region. Launched in 2011, the ministry's Boreal Watershed Initiative provides a baseline assessment on the health of Saskatchewan's northern watersheds. Saskatchewan's Boreal region contains some of the largest and highest-quality freshwater resources on Earth. This natural freshwater reservoir has global significance, where water quality and availability are dependent upon the integrity of these watersheds. This study provides an understanding of the state of the environment and potential changes we may be seeing on the landscape. Researchers and consultants can use these results to identify regional environmental responses to multiple land uses by industry and others.
3.1i	Define a strategy to reduce the contamination risk posed to groundwater sources by abandoned water wells Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Completed in 2013-14.
3.1j	Negotiate with Canada a new commitment to continue the Environmental Farm Plan Program, with a focus on nutrient management and protection of water supplies Completion Target Year: 2013 LEAD AGENCY: Ministry of Agriculture Update: Completed in 2013-14.
3.2a	Prepare a new provincial wetland policy that includes an assessment of the status of wetlands in the province and identification of conservation priorities, including a strategy to retain and restore wetlands Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Work occurring in tandem with legislation development and drainage program development.
3.3a	Establish site-specific objectives for environmental flows in priority surface water systems Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed. Qu'Appelle discussions complete. Cypress Hills/Mountain Sucker discussions complete.

Action Number	Action Description
3.3b	Prepare an aquatic alien species strategy to identify and address significant threats to biodiversity and ecosystem health Completion Target Year: 2015 LEAD AGENCY: Ministry of Environment Update: The Ministry of Environment developed a draft Aquatic Invasive Species (AIS) Strategy in consultation with other government agencies and NGOs in early 2017, with the final strategy expected mid-2017. The Government of Saskatchewan has implemented a number of actions to prevent aquatic invasive species from entering our province and doing harm to waters they invade. Prevention is of the utmost importance. The government has focused on public awareness through education and targeted signage about the Clean, Drain, Dry program, roadside boat inspections, decontaminations and regular monitoring of Saskatchewan's busy waterbodies. Saskatchewan also partners with provincial organizations, Canada Border Security Agency, and other provincial governments in British Columbia, Alberta, Manitoba and the Yukon to coordinate prevention on a regional basis. To date, no invasive mussels have been found within Saskatchewan.
3.3c	Develop protocols with the Department of Fisheries and Oceans to ensure the ongoing protection of fish habitat under the new federal Fisheries Act Completion Target Year: 2013 LEAD AGENCY: Water Security Agency Update: Completed. Coordination of Aquatic Habitat Protection Permitting process with Fisheries and Oceans Canada's (DFO) new approach has been achieved. Provincial-Federal issues are dealt with through the Saskatchewan Fisheries Issues Committee.
3.4a	Update the source water protection planning process to achieve resilient, locally appropriate source water protection plans that are informed by science to identify key local threats to source water protection, address drinking water source protection, and identify achievable solutions for implementation. Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Pilot project with five stewardship groups to develop source water protection processes is complete. Training with stewardship groups in November 2016 was delivered. Source water protection extension program pilot project report has been advanced to our executive to determine a programming path forward.
3.4b	Work with Saskatchewan Association of Watersheds to more clearly identify the future roles and responsibilities of watershed and aquifer planning groups, including the renewal of source water protection plans Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Leadership decision around role of Saskatchewan Association of Watersheds (SAW) needed to progress further on this action. Within the next fiscal year we plan to work with SAW to define a program model.
3.4c	Evaluate the need to expand source water protection planning to additional watersheds or aquifers Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Leadership decision around role of SAW needed to progress further on this action. Within the next fiscal year we plan to work with SAW to define a program model.

Action Number	Action Description
3.4d	Assess and renew the approach to implementing source water protection plans to ensure that threats to source water are mitigated into the future Completion Target Year: 2013 LEAD AGENCY: Water Security Agency Update: Source water protection extension program pilot project report has been advanced to our executive to determine a programming path forward.
4.1a	Implement the Water Security Agency's 10 year plan for infrastructure rehabilitation and dam safety Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: The major initiatives in the 10 year plan have been addressed.
4.1b	Establish legislative requirements for dam safety for both public and private dams and identify long term strategies for compliance Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Consulting with stakeholders on this during legislative renewal project.
4.1c	Complete emergency preparedness plans for major Water Security Agency dams Completion Target Year: 2013 LEAD AGENCY: Water Security Agency Update: Completed in 2013-14.
4.2a	Review existing reservoir operating plans and update them on a priority basis Completion Target Year: 2014(priority) LEAD AGENCY: Water Security Agency Update: Concerted effort required to finalize all reservoir operating plans to report for EMT and Government Review.
4.2b	Negotiate transfer of federally owned infrastructure to the province where appropriate to meet provincial interests Completion Target Year: 2017 LEAD AGENCY: Water Security Agency Update: Dam transfer is complete as of midnight March 31, 2017.
5.1a	Develop improved flood forecasting tools Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: University of Saskatchewan report on hydrological modelling recommendations has been completed. We are plotting a course forward.
5.1b	Develop a provincial emergency flood response plan that addresses community, individual and local government responsibilities Completion Target Year: 2014 LEAD AGENCY: Ministry of Government Relations Update: Completed. The all-hazards Provincial Emergency Management Plan is reviewed annually and updated as needed.

Action Number	Action Description
5.1c	Develop a strategy to ensure communities and the public have access to flood hazard information and are aware of potential flood risks Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: SaskAlert system is in place for emergency alerting. WSA is working with the Federal government to update and add new floodplain mapping.
5.1d	Undertake a flood risk assessment of municipal drinking water and wastewater infrastructure Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Completed. WSA's Environmental Project Officers have general awareness of the flood risk to drinking water and wastewater infrastructure. No formal listing of facilities at risk has been started yet.
5.1e	Encourage municipalities to map flood risk areas associated with under-capacity of wastewater and storm sewer infrastructure as projected in the Insurance Bureau of Canada's report on impacts associated with climate change Completion Target Year: Abandoned LEAD AGENCY: Ministry of Government Relations Update: The province has switched to a broader flood risk assessment strategy, in part to capture funding under the Federal National Disaster Mitigation Program.
5.1f	Implement the flood protection and prevention measures established in <i>The Statements of Provincial Interest Regulations (SPI)</i> into local official community plans and zoning bylaws Completion Target Year: Ongoing LEAD AGENCY: Ministry of Government Relations Update: This is ongoing, and is being implemented as communities renew their official community plans and zoning bylaws. In 2016-17, 60 new official community plans were approved with flood prevention and protection measures as contained within SPI. In addition, 997 subdivisions totaling 2,324 sites were approved that meet the flood protection standards contained within the SPI.
5.1g	Pursue negotiations with Canada to develop and implement a new long term federal-provincial program for flood mitigation as part of an all hazards program Completion Target Year: 2014 LEAD AGENCY: Ministry of Government Relations Update: Working with Federal Government in addressing damage reduction for communities under the National Damage Mitigation Program (NDMP). In 2015, Saskatchewan applied for NDMP funding to complete a provincial hazard risk assessment (RA) by March 2018 to rank our most costly and dangerous natural hazards. Canada approved this proposal and entered into an agreement with Saskatchewan to fund 50 per cent of the \$184,000 total project cost. The Saskatchewan Research Council was contracted in 2016 to carry out this work. GR will lead the RA project and coordinate future project intakes for the remaining two years of the NDMP program with other government partners.
5.2a	Assess the range of alternatives and implement strategic actions to manage drainage Completion Target Year: 2013 LEAD AGENCY: Water Security Agency Update: WSA announced the new Agricultural Water Management Strategy and new drainage regulations in the fall of 2015 and is moving from pilot projects to priority basins, implementing the Agricultural Water Management Strategy in priority and high-risk areas, and revising it as necessary.

Action Number	Action Description
5.2b	Develop a results-based drainage works approval process and associated enforcement strategy, including the potential use of financial penalties Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: WSA worked on legislative changes for 2016-17 and expects to establish by regulation two advisory bodies for agricultural water management. This will involve consultation with stakeholder groups.
5.2c	Develop new strategies to effectively address excessive moisture concerns on agricultural lands, including provision of information and advice on proper drainage design and management and consideration of the benefits of wetland retention and restoration Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: WSA is looking at mitigation options. Wetlands and wetland mitigation and implementation of drainage approval process are tightly linked. Looking towards development of excess moisture issues strategy.
5.3a	Develop a coordinated provincial drought response plan that includes monitoring, preparedness, response, and recovery approaches Completion Target Year: 2014 LEAD AGENCY: Ministry of Agriculture Update: Ministry of Agriculture led development of terms of reference for the project. A draft of the drought plan has been developed and finalization of a drought response plan is underway.
5.3b	Develop new regulations for water allocation to help manage water shortages during droughts Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Completed. Working on development of water allocation legislation. Water allocation regulations will follow the legislation.
6.1a	Complete a strategic review of major monitoring programs, including surface water, groundwater and water quality Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Completed. This was completed in 2015-16 Q1 with Weather Innovations launching our precipitation data mapping site. A more collaborative approach with other provincial agencies to establish a SK mesonet (a network of automated weather and environmental monitoring stations) is being investigated by the SRC.
6.1b	Develop an integrated geographically referenced database to provide government-wide and public access to water-based information Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Completed. WSA implemented a location based platform in 2015-16 and it is expected that the public on-line Water Wells application will be upgraded to the location based platform in the first quarter of 2016.
6.1c	Consolidate precipitation data and information through the development of cooperative agreements and partnerships with government and non government organizations Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Completed. A cooperative agreement with Weather Innovations Network for rainfall mapping products has been signed.

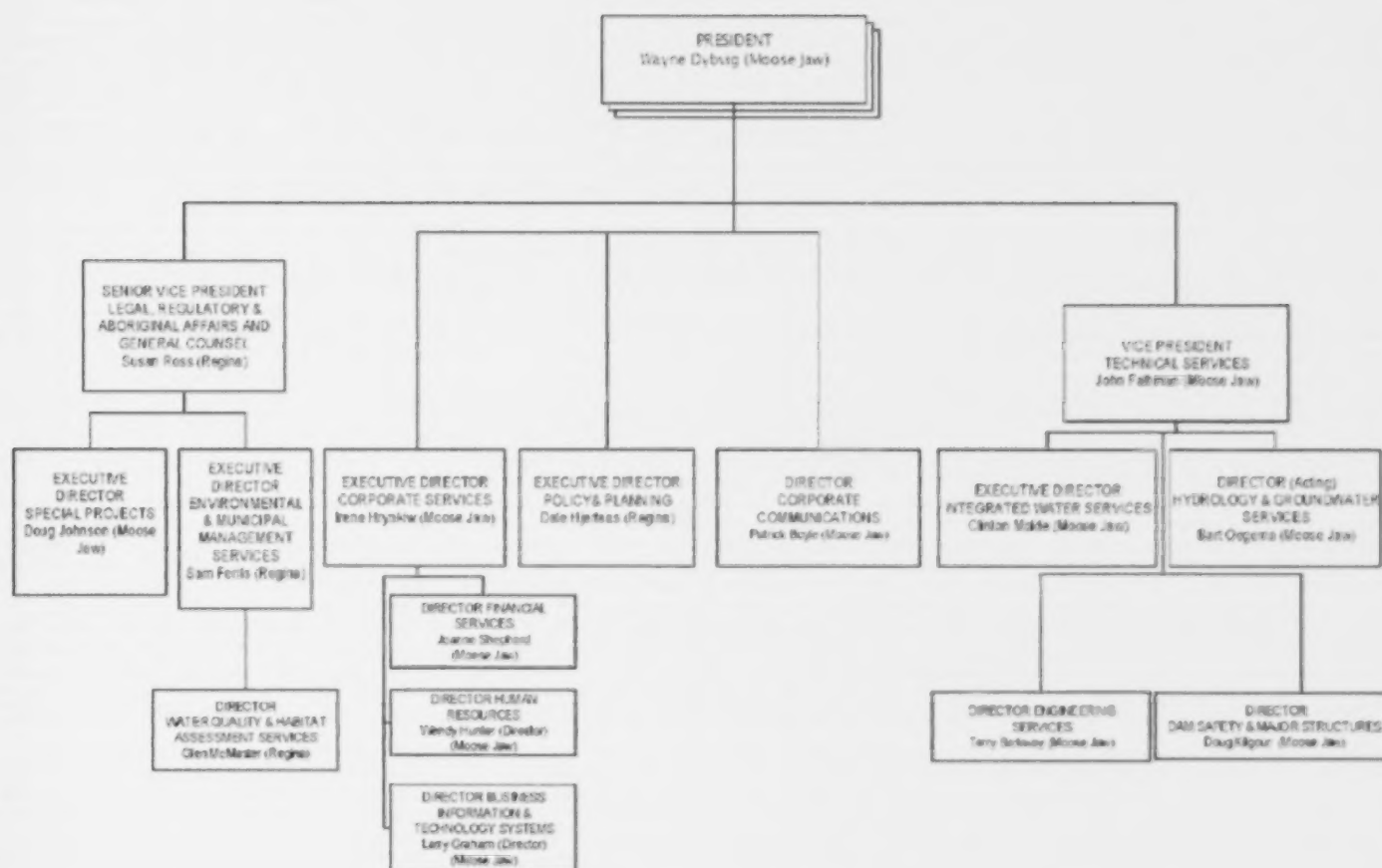
Action Number	Action Description
6.2a	Establish protocols for informing the public during emergencies related to flood, drought, infrastructure failure, and water quality and drinking water concerns Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: Completed in 2014-15.
6.2b	Develop a user-friendly water information portal on the new Water Security Agency web site to make information on water and water management issues widely available Completion Target Year: Abandoned LEAD AGENCY: Water Security Agency Update: The Wells database is nearly ready to be posted on the WSA's website using Geocortex. The intent is to follow with other data sets.
6.2c	Report on progress in implementing the 25 Year Water Security Plan Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Reported by means of this document.
6.2d	Publish the State of the Watershed Report every five years in an expanded form which can be applied by government in the renewal of the 25 Year Saskatchewan Water Security Plan and by the public in decision making Completion Target Year: Abandoned LEAD AGENCY: Water Security Agency Update: WSA will provide material for State of Environment Report, but will no longer publish a State of the Watershed Report.
6.3a	Support the work of the Global Institute for Water Security at the University of Saskatchewan in their assessment of the water supply and quality issues in the South Saskatchewan River Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: The Lake Diefenbaker study with the University of Saskatchewan is continuing.
6.3b	Identify opportunities to collaborate with external academic and research partners on defining and undertaking strategic research initiatives Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Assessment of Lake Diefenbaker water quality with the University of Saskatchewan will continue in 2016-17 and collaborating with the University on flood forecasting improvements.
7.1a	Develop modern and comprehensive water legislation Completion Target Year: 2014 LEAD AGENCY: Water Security Agency Update: In 2015, three regulations were repealed and one regulation revision was completed. WSA plans to consult on comprehensive new water legislation during 2016-17.

Action Number	Action Description
7.2a	Establish provincial Deputy Ministers' Water Committee Completion Target Year: 2013 LEAD AGENCY: Water Security Agency Update: Completed. Committee held one meeting.
7.2b	Work with Canada to identify opportunities to improve regulatory and program coordination and collaboration Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: WSA continues to meet with Fisheries and Oceans Canada (DFO) and Environment Canada under the protocol agreement to discuss issues of concern. WSA has signed an agreement to lead implementation of the Federal Wastewater System Effluent Regulations.
7.3a	Develop improved models for engagement with First Nations and Métis to better understand their perspectives on water and water management and facilitate effective working relationships Completion Target Year: Abandoned LEAD AGENCY: Water Security Agency Update: WSA is moving from a model focused on training staff to a new model based on the success WSA has working with non-aboriginal communities. One key shift then is to move from a dialogue centred on adverse impacts to an interest-based and collaborative approach. The second key shift is to do this on a case-by-case basis using a mentoring approach rather than through training.
7.3b	Where water management decisions may have an adverse impact on the exercise of treaty and aboriginal rights and pursuit of traditional uses, consult with First Nations and Métis in accordance with the First Nations and Métis Consultation Policy Framework Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Completed. WSA undertook pre-consultation and consultation processes with a number of First Nation and Métis local governments regarding regulatory approvals or planning initiatives in an attempt to identify potential adverse impacts to treaty or Aboriginal rights and to seek options for avoiding or mitigating such impacts.
7.4a	Establish the Provincial Water Council with sector-based representation Completion Target Year: Abandoned LEAD AGENCY: Water Security Agency Update: This action has been abandoned. WSA has developed an engagement strategy which includes regular meetings with major stakeholders instead of a water council.
7.5a	Investigate new approaches to engage the public and local governments on water issues and decisions of importance to them Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Completed. WSA has developed a new engagement strategy.

Action Number	Action Description
7.6a	Continue to work with the Prairie Provinces Water Board to evaluate the resiliency of the Master Agreement on Apportionment Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Completed. Work to continue as ongoing issues arise.
7.6b	In support of the Mackenzie River Basin Board, negotiate bilateral agreements with Alberta and North West Territories Completion Target Year: 2016 LEAD AGENCY: Water Security Agency Update: Work is progressing on both the AB and NWT bilateral agreements , and will extend into fiscal 2017/18.
7.6c	Continue to work with the International Souris River Board of the International Joint Commission (IJC) to establish an enhanced operating plan for Rafferty and Alameda reservoirs Completion Target Year: 2015 LEAD AGENCY: Water Security Agency Update: Inflow design flood confirmation to come followed by drafting of the reservoir operating plan and solicitation of United States feedback. Cooperating with IJC on moving the study forward.
7.6d	Continue to support the work of the Council of the Federation Water Stewardship Council to use information and experience from other jurisdictions across Canada to address water problems in Saskatchewan Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: Completed in 2013-14. Study aquifers around Regina and Estevan area. Develop and maintain models of different basins. Work to continue as ongoing issues arise.
7.6e	Continue to work with the Canadian Council of Ministers of the Environment to address emerging water issues common to all jurisdictions Completion Target Year: Ongoing LEAD AGENCY: Water Security Agency Update: WSA has and continues to participate on the CCME Water Management Committee to address water related issues common to jurisdictions across Canada. Saskatchewan is providing input into prioritization of emerging water issues in order to direct Water Management Committee work over the next several years.
7.7a	Undertake comprehensive water management analyses for priority surface and groundwater systems Completion Target Year: 2014(priority)/2016(other) LEAD AGENCY: Water Security Agency Update: Study aquifers around Regina and Estevan area. Develop and maintain models of different basins.
7.7b	Implement new watershed modeling and database management systems to allow efficient evaluation of new requests for water and ensure that cumulative effects are considered Completion Target Year: 2014(priority)/2016(other) LEAD AGENCY: Water Security Agency Update: Capacity exists to model water demands under current hydrologic conditions for the South Saskatchewan, Qu'Appelle, Saskatoon South East Water Supply (SSEWS), and Bigstick systems. Work was initiated to bring models up to date for the Swift Current Creek and Souris systems in 2016-17.

Appendix B

Organizational Structure



Appendix C

Legislation Administered by Water Security Agency

The Conservation and Development Act

The Water Power Act

The Watershed Associations Act

Portions of The Environmental Protection Act, 2010

Portions of The Public Health Act, 1994